CIVIL TECH LABS

Accredited by NABL as per ISO/ IEC 17025 : 2005

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654

To,

Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP.

28th April 2016

Dear Sir,

Sub: Testing of Wet mix Macadam.

As requested, tests on physical properties were carried out for the Wet mix Macadam supplied by you, for the work of **'Improvements to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.'**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

Khushboo

(KHUSHBOO L.)
Quality Manager

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP - 97

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TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of the Agency	Sri. T. K. Shankarappa.
Date of Testing	28/04/2016
Technical Reference	MORTH Table 400-11

IS Sieve Designation (mm)	% By Weight Passing IS Sieve	Actual % By Weight Passing IS Sieve	Remarks
53	100	**100**	**Satisfy the Requirements**
45	95-100	**98.3**	
22.4	60-80	**74.6**	
11.2	40-60	**51.2**	
4.75	25-40	**32.8**	
2.36	15-30	**24.6**	
0.6	8-22	**18.5**	
0.075	0-8	**7.3**	

Note:

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3.Any correction invalidates this report.

4.The results are based on the test conducted on samples supplied by the customer.

Khushboo

(KHUSHBOO L.)
Quality Manager

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TEST REPORT

TEST ON AGGREGATES ('AIV' & Combined Flakiness & Elongation Index)

Wet Mix Macadam

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Agency of the Name	Sri. T. K. Shankarappa.
Date of Testing	28/04/2016
Reference	**MORTH Table 400-10**

Sample No	Aggregate Impact Value 'AIV' in %	Average AIV in %	Remarks
1	22.3	22.9	Satisfactory (As per MORTH for WMM, Maximum allowed AIV is 30 %)
2	23.5		

Test	Result in %	Combined Flakiness & Elongation Index 'C-F&E' in %	Remarks
Flakiness Index	11.5	25.1	Satisfactory (As per MORTH for WMM, Maximum allowed 'C-F&E' is 30 %)
Elongation Index	13.6		

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(KHUSHBOO L.)
Quality Manager

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T-2654

To,

Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP.

31st May 2016

Dear Sir,

Sub: Improvements to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Testing of cubes – Reg.

As requested the 28th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Reports of the above.

Thanking you,

For Civil Tech Labs,

CIVIL TECH LABS BANGALORE

(KHUSHBOO L.)
Quality Manager

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Grade of Concrete	M-15
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm^2)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm^2)	Avg Compressive Strength (N/mm^2)
1	CC-Work	150.16 X 150.15 X 150.0	22547	02/05/2016	30/05/2016	28	8.16	354	**15.73**	**15.88**
2		150.17 X 150.14 X 150.0	22547				8.18	356	**15.82**	
3		150.21 X 150.18 X 150.0	22559				8.21	362	**16.09**	

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Quality Manager

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Grade of Concrete	M-20
Location	Drain
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm^2)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm^2)	Avg Compressive Strength (N/mm^2)
1	Sample-1	150.14 X 150.13 X 150.0	22541	03/05/2016	31/05/2016	28	8.15	485	**21.56**	**21.85**
2		150.15 X 150.12 X 150.0	22541				8.17	490	**21.78**	
3		150.16 X 150.19 X 150.0	22553				8.19	500	**22.22**	

Note:

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Khushboo

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Grade of Concrete	M-20
Location	Drain
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm^2)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm^2)	Avg Compressive Strength (N/mm^2)
1	Sample-2	150.14 X 150.15 X 150.0	22544	03/05/2016	31/05/2016	28	8.17	495	**22.00**	**22.22**
2		150.18 X 150.17 X 150.0	22553				8.19	500	**22.22**	
3		150.19 X 150.21 X 150.0	22560				8.20	505	**22.44**	

Note:

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Khushboo

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Grade of Concrete	M-20
Location	Drain
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm^2)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm^2)	Avg Compressive Strength (N/mm^2)
1	Sample-3	150.13 X 150.11 X 150.0	22536	03/05/2016	31/05/2016	28	8.19	485	**21.56**	**21.78**
2		150.17 X 150.15 X 150.0	22548				8.20	490	**21.78**	
3		150.18 X 150.19 X 150.0	22556				8.22	495	**22.00**	

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Quality Manager

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Grade of Concrete	M-20
Location	Drain
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm²)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm²)	Avg Compressive Strength (N/mm²)
1	Sample-4	150.12 X 150.14 X 150.0	22539	03/05/2016	31/05/2016	28	8.17	495	**22.00**	**22.37**
2		150.18 X 150.16 X 150.0	22551				8.19	505	**22.44**	
3		150.19 X 150.21 X 150.0	22560				8.20	510	**22.67**	

Note:

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Grade of Concrete	M-20
Location	Drain
No. of cubes tested	3
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	ID	Dimension of specimen (mm)	Cross sectional area (mm^2)	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm^2)	Avg Compressive Strength (N/mm^2)
1	Sample-5	150.16 X 150.17 X 150.0	22550	03/05/2016	31/05/2016	28	8.15	500	**22.22**	**22.44**
2		150.15 X 150.18 X 150.0	22550				8.16	505	**22.44**	
3		150.18 X 150.19 X 150.0	22556				8.17	510	**22.67**	

Note:

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Quality Manager

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T-2654

To,

Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP.

25th April 2016

Dear Sir,

Sub: Testing of Materials.

As requested, tests on physical properties were carried out for the Materials supplied by you, for the work of **'Improvements to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.'**

Please find the enclosed Test Reports of the above.

Thanking You,
For Civil Tech Labs

CIVIL TECH LABS BANGALORE

(KHUSHBOO L.)
Quality Manager

AE-9
Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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TEST REPORT

GRADATION TEST ON COARSE AGGREGATES 20mm ↓ Graded

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Date of Testing	25/04/2016
Specific Gravity	**2.63**
Water Absorption	**0.31%**
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 (Part III)–1963 (Reaffirmed 2011)

IS Sieve Designation (mm)	**Sieve Analysis (% Passing IS Sieve)**	**Grading Requirement as per IS:383-1970 (Reaffirmed 2011)**	**Remarks**
40	**100**	100	**Satisfies the requirement**
20	**98.5**	95-100	
10	**42.3**	25-55	
4.75	**7.7**	0-10	

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TEST REPORT

GRADATION TEST ON COARSE AGGREGATES 40mm ↓ Graded

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Date of Testing	25/04/2016
Specific Gravity	**2.67**
Water Absorption	**0.29%**
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 (Part III)–1963 (Reaffirmed 2011)

IS Sieve Designation (mm)	**Sieve Analysis (% Passing IS Sieve)**	**Grading Requirement as per IS:383-1970 (Reaffirmed 2011)**	**Remarks**
80	**100**	100	**Satisfies the requirement**
40	**97.2**	95-100	
20	**53.6**	30-70	
10	**23.7**	10-35	
4.75	**4.1**	0-5	

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(KHUSHBOO L.)
Quality Manager

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TEST REPORT

GRADATION TEST ON FINE AGGREGATES

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of Agency	Sri. T. K. Shankarappa.
Date of Testing	25/04/2016
Specific Gravity	**2.57**
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 (Part III)–1963 (Reaffirmed 2011)

Sample	IS Sieve designation (mm)	Sieve Analysis (% Passing IS Sieve)	Grading Requirement as per IS:383-1970 (Reaffirmed 2011)				Grading Zone	Remarks
			ZONE-I	ZONE-II	ZONE-III	ZONE-IV		
River Sand	10	**100**	100	100	100	100	II	Satisfies the requirement
	4.75	**97.5**	90-100	90-100	90-100	95-100		
	2.36	**86.5**	60-95	75-100	85-100	95-100		
	1.18	**74.3**	30-70	55-90	75-100	90-100		
	0.6	**47.9**	15-34	35-59	60-79	80-100		
	0.3	**23.5**	5-20	8-30	12-40	15-50		
	0.15	**8.8**	0-10	0-10	0-10	0-15		

Note:

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CIVIL TECH LABS BANGALORE

(KHUSHBOO L)
Quality Manager

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TEST REPORT

TEST ON CEMENT

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of the Agency	Sri. T. K. Shankarappa.
Date of Testing	25/04/2016

Tests	**Test Method As Per IS & Apparatus**		**Results**		**Requirements As Per IS 8112:1989**	**Remarks**
	IS Code	**Method**	**Value**	**Unit**		
Initial Setting Time	**IS-4031 (Part-5) 1988**	VICAT	50	min	Not Less Than 30 Minutes	Satisfies Requirement
Final Setting Time	**IS-4031 (Part-5) 1988**	VICAT	486	min	Not More Than 600 Minutes	Satisfies Requirement
Soundness	**IS-4031 (Part-3) 1988**	LE-CHATELIER	4	mm	Not More Than 10 mm	Satisfies Requirement

Note:

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Quality Manager

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TEST REPORT

TESTS ON REINFORCEMENT STEEL BAR 10mm

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvemnets to roads and drains at Puttananjappa layout 5th main I/F of shiva temple in ward no. 9, in Vidyaranyapura Sub Division.
Name of the Agency	Sri. T. K. Shankarappa.
Date of Testing	25/04/2016
Grade of Steel	Fe - 500.

Sl.No.	Description	Result	IS 1786-2008 Min. Requirements	Remarks
1	Measured Diameter mm	10	10	Satisfactory
2	Wt/m Length (Kg/m)	0.618	0.617	Satisfactory
3	Bend & RebendTest	Pass	Should not Crack or Fracture	Satisfactory
4	Elongation (%)	13.2	12	Satisfactory
5	Yield Stress(N/Sq.mm)	506	500	Satisfactory
6	U T S (N/Sq.mm)	562	545	Satisfactory

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(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE